

REMARKS

The Applicant wishes to thank the Examiner for his careful consideration of this application. Claims 1, 4, 6-7, 9, 11-12, 15, 17-18, and 20 are rewritten upon entry of this paper. Claims 2, 3, 8, 10, 13, 14, 16, 19, 21 are withdrawn on the basis of a provisional election. As the Examiner indicated, the Applicant has elected, without traverse, the invention represented by and generic Claims 1, 4, 9, 11, 12, 17, 18 and species claims 5-7, 15 and 20 [Species I]. Claims 2-3, 8, 10, 13, 14, 16, 19 and 21 have been withdrawn. Applicants hereby request reconsideration and further examination.

Claims 6-7 and 9 stand objected to because the drawings did not show "every feature." The claims have been amended to more clearly claim the desired features of the invention and the Applicant now believes that all these features that can be shown are shown in the appropriate drawing. There are some material characteristics that one skilled in the art would understand are part of the material's features that the Applicant does not believe are necessary to show but are part of the claim and if there is still a concern by the Examiner, the Applicant encourages the examiner to contact the Attorney listed below. Claims 4 and 17-21 have also been amended as suggested by the Examiner.

The present invention describes and claims an electrographic development machine utilizing developer material having toner particles with magnetic content with a means for generally balancing the magnetic forces acting on the toner particle with magnetic content. The application makes clear in the detailed description that it is describing a means to "generally balance[s] the magnetic forces acting on magnetic toner particle T₂ within development machine 30. With the magnetic forces generally balanced, the electrical forces acting on toner particle T₂ predominate and the above-described undesirable effects of the magnetic forces on the image are substantially reduced." Paragraphs 28, line 9-13 on page 8. This concept of "generally balancing the electrical forces" is key to the invention and is also discussed in other parts of the application including in paragraphs 30 and 31 as well as shown in FIG. 5, which makes clear that the forces are not exactly balanced. It is important that the forces be "generally balanced" and that the "generally balanced" forces be adjustable so that the invention will work as described in the detailed description.

In typical two-component electrographic systems, one component is magnetic, called the carrier, so that it can be moved around the toning station carrying the other component, the toner. The toner is normally non-magnetic so that it can react to an image-wise electrical pattern when brought near or in contact with it. When the toner is itself magnetic as in a MICR toner, then it is reactive to both the magnetic forces and the electric

forces in the toning station. Behavior of non-magnetic toner is covered in both the Snelling et al and the Kushima et al patents, but neither works well with magnetic toner.

If an equal and opposite magnetic pole is juxtaposed on the opposite side of the photoconductor, as it is in the Kushima et al U.S. Patent No. 3,631,838, then the resultant magnetic field drives carrier as well as MICR toner into a pattern along the magnetic field lines resulting in little or no separation of toner from carrier. This results in developer carry-out (developer being carried out of the toning station by the photoconductor) and image background. The object of Kushima et al is to sweep the photoconductor surface with a two-component developer made of non-magnetic toner for uniform toning. Carrier-toner separation occurs and only the toner is left on the photoconductor.

In the opposite situation, where the same poles are situated on opposite sides of the photoconductor, the Snelling et al U.S. Patent No. 5,926,676, indicates using this repelling force to keep the magnetic carrier away from the photoconductor, allowing the non-magnetic toner to react to the image-wise electrical pattern on the photoconductor. If a magnetic toner were used in this case, the result would be that both the carrier and toner are repelled from the photoconductor by the magnetic pole.

It is between these extremes where separation of toner can occur and the magnetic fields are subdued enough to allow the magnetic toner to react to the image-wise electrical pattern on the photoconductor. The ability to adjust the angle between the magnetic poles on either side of the photoconductor to an acceptable angle is important since the carrier separation and toning capability of the magnetic toner can then be adjusted for the best setting.

Claims 1, 4, 6, 9, 11, 15, 17-18 and 20 stand rejected under 35 U.S.C. §102(b) as being unpatentable over Snelling (U.S. Patent No. 5,926,676). In the rejection, the examiner stated that Snelling "developer material having toner particles with magnetic content." The Applicant respectfully disagrees. Snelling describes developer with a magnetic carrier and a non-magnetic toner and it is clear to one skilled in the art that Snelling would not work with a magnetic toner as described in the present application.

Snelling shares that the patent "developer material comprises toner particles adhering triboelectrically to carrier granules" in col. 1, lines 29-30 and that the developer material after being mixed is "magnetic carrier and toner" col. 2, lines 23-24, col. 5 lines 27-31 and col. 7, lines 6-9. This is very different from the present invention, which, as described in paragraph 23, has "[m]agnetic toner particle T₂ is, however, subjected to magnetic forces that did not significantly affect nonmagnetic toner particle T₁." The present invention must

over come different and stronger magnetic forces as discussed in paragraph 24 and does so in a different manner than Snelling. In fact the Snelling method teaches away from the present invention by teaching using "opposing magnetic poles that are aligned in the development zone."

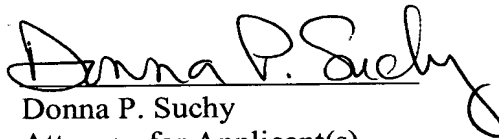
Claims 11 and 17 have been similarly amended to contain the "generally balance" limitation and the rest of the claims are dependent on these now allowable independent claims.

Finally, with respect to the other art cited, the Applicant respectfully submits that they do not provide sufficient objective motivation, for one of ordinary skill in the relevant art, to modify Snelling in the manner attempted.

In conclusion, Applicants respectfully submit that claims 1, 4-7, 9, 11-12, 15, 17-18, and 20 are allowable in their present form, without a restriction, and hereby request such allowance.

The Commissioner is hereby authorized to charge any fees in connection with this communication to Eastman Kodak Company Deposit Account No. **05-0225**. A duplicate copy of this communication is enclosed.

Respectfully submitted,



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If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.

Amendments to the Drawings:

The Applicant has amended all the drawings as recommended by the Examiner in order to more closely follow the guidelines recommended in the MPEP. The words "Prior Art" have been added to FIG. 1 as the Examiner requested, the cross hatching for dielectric and the casing have been changed to that for a "conductive insulating material" and a "plastic" to more closely represent what is discussed in the specification. As always, the Examiner should reference the specification to better understand what this cross-hatching means since the MPEP definitions appear more limiting than we use in the specification.

The Applicant did not make any changes to the drawings concerning the subject matter claimed in claims 6-7 and 9. These claims have been amended as discussed on page 4 and 5 of this paper.

The attached sheets of drawings include changes to FIG.s 1-6. These sheets replace the originally submitted drawings for FIG.s 1-6, which incorporate the changes required by the Examiner. Approval by the Examiner is respectfully requested.

Attachments: Replacement FIG.s 1-6

Annotated Sheets Showing Changes



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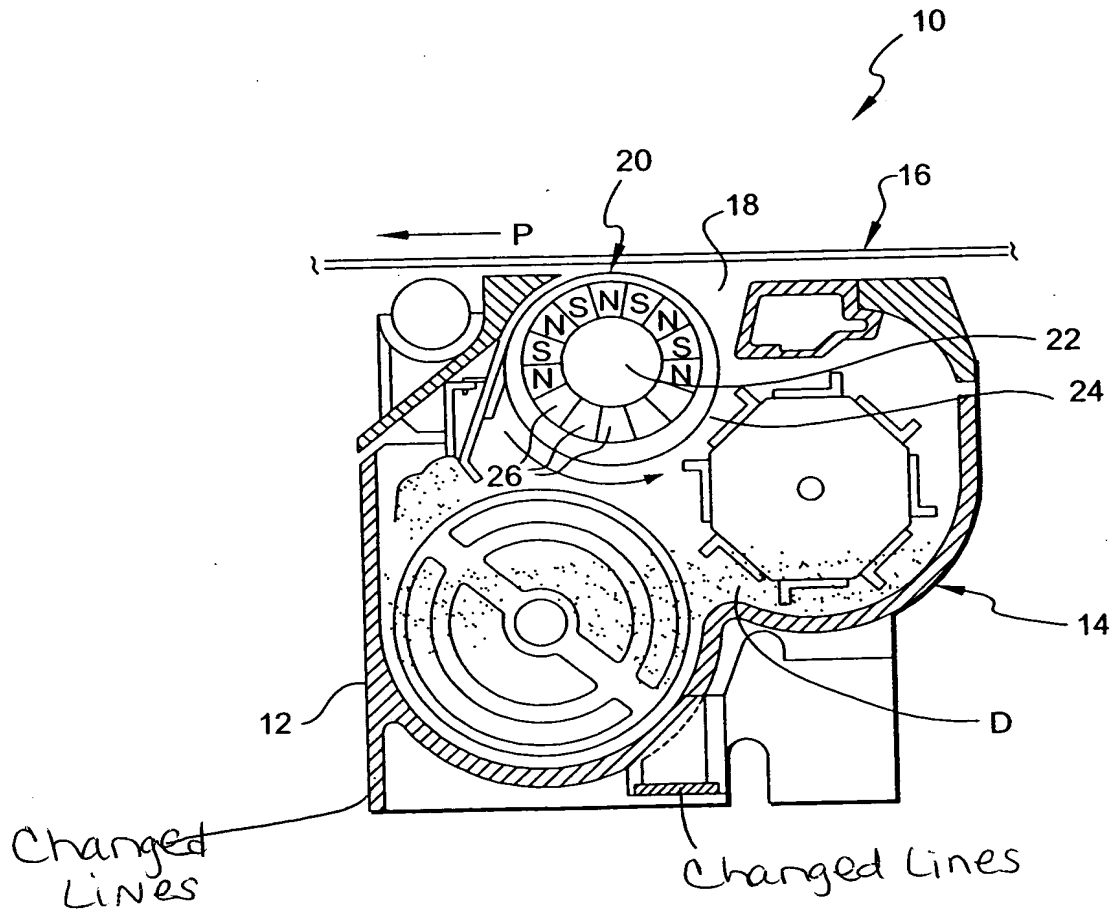


FIG. 1
(Prior Art)

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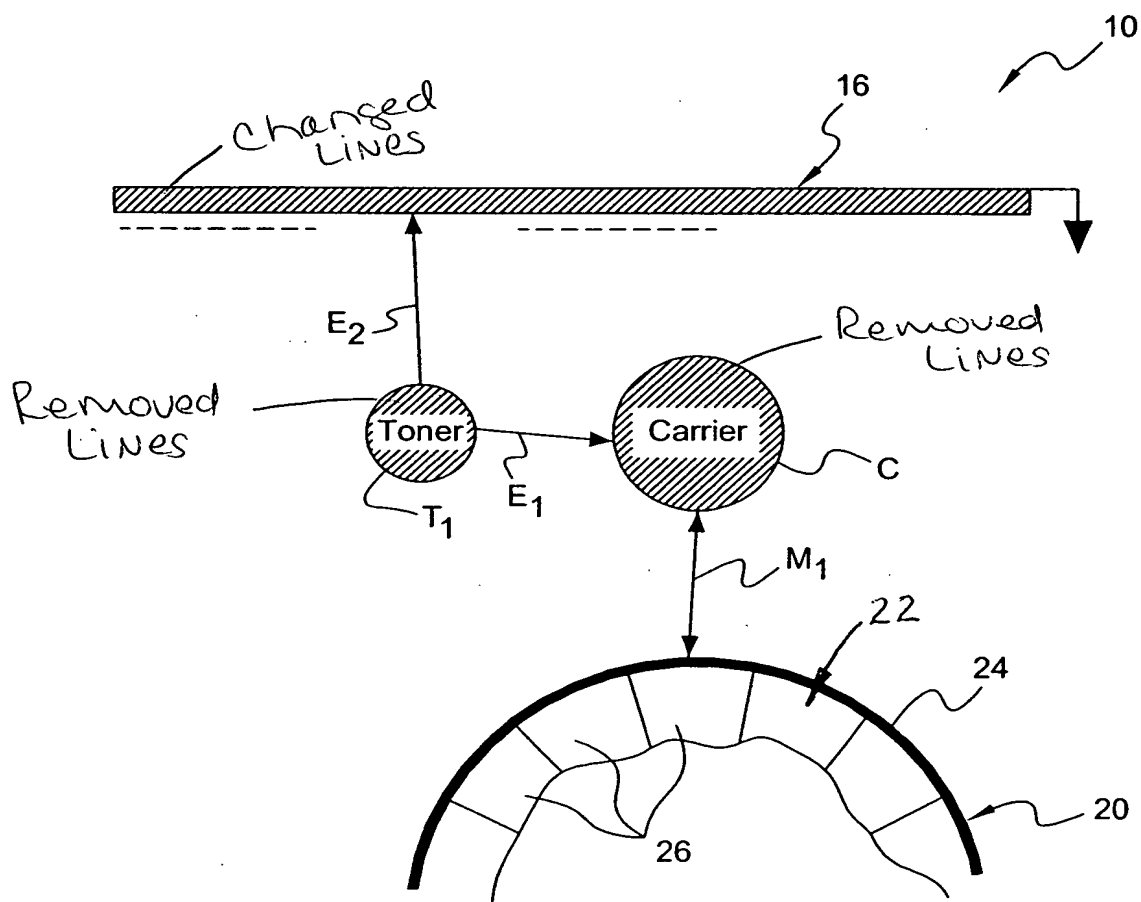


FIG. 2

FIG. 3

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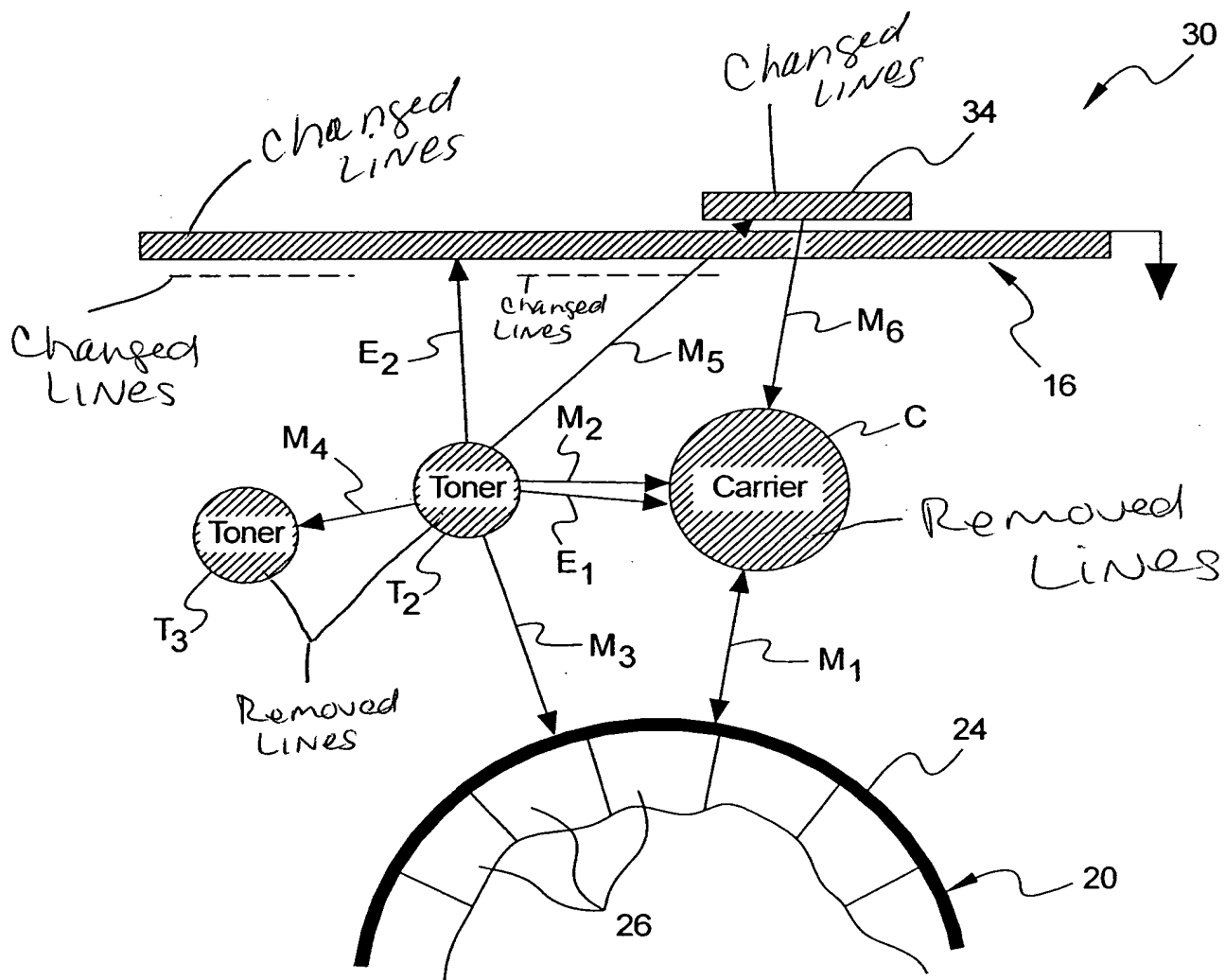


FIG. 4



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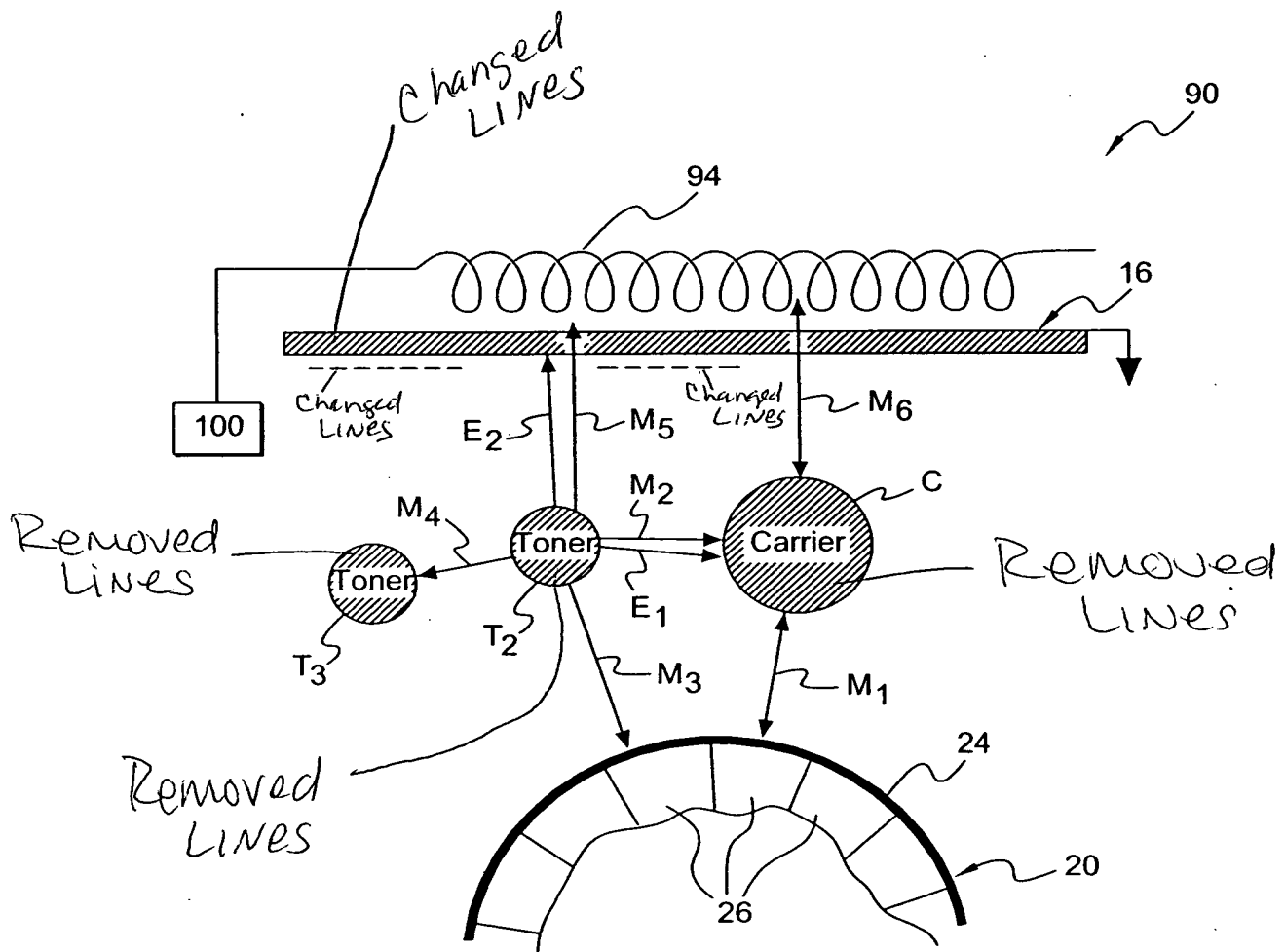


FIG. 6